

REMARKS

Claims 1-20 are pending in this application.

Claims 1-20 are rejected.

Claims 1, 8, 10, 13 and 15 have been amended.

Reconsideration and allowance of claims 1-20 as amended is requested for the reasons explained below.

SPECIFICATION:

The abstract of the disclosure was objected to because it exceeds the maximum of 150 words.

The abstract has been amended so that it does not exceed 150 words.

CLAIM OBJECTIONS:

Claims 1-7 and 13 are objected to because of certain informalities and Claims 2-7 were objected to for inheriting the limitations of claim 1.

The claims have been amended to eliminate the informalities noted by the examiner.

CLAIM REJECTIONS – 35 USC § 112

Claims 8-20 were rejected under 35 USC 112 for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 9-14 and 16-20 were rejected for further inheriting the limitations of claims 8 and 15 respectively.

The claims have been amended to eliminate the problems with insufficient antecedent basis that were noted by the examiner.

CLAIM REJECTIONS under 35 USC § 103

Claims 1-2, 5-10, 12, 14-16 and 19-20 were rejected under 35 USC 103(a) as being unpatentable over U.S. Pat. No. 5,644,539 to Yamagami et al. ("Yamagami") and in further view of U.S. Pub. No. 2004/0044838 A1 to Nickel et al. ("Nickel").

Only claims 1, 8 and 15 are independent claims. The difference between claim 1 and the references will be discussed first.

Applicant's claim 1 recites a method of transferring data from a host to a flash memory via a bus. The claim recites that the claimed method utilizes a cache memory that has banks of Magnetic Random Access Memory (MRAM).

Particular banks of flash memory are exclusively associated with particular sectors of the flash memory. That is, data associated with one sector of the flash memory is stored in one particular bank of the MRAM memory and data associated with another sector of the flash memory is stored in a different bank of the MRAM memory.

The claimed method includes the steps of:

"exclusively associating a bank of MRAM memory with a particular sector of said flash memory to which data has been transmitted,

temporarily storing data transmitted to said flash memory in said associated bank of MRAM memory"

The Yamagami reference that was cited by the examiner shows in Figure 25 (that was referenced by the examiner) a flash memory that is divided into sectors. One of the sectors (sector 142) shown in Yamagami is used as a buffer.

The Yamagami reference explains (at column 21 lines 54 et. seq.) that the buffer area can be larger than the size of a sector in the other part of the memory. The reference further indicates that if the buffer is larger than the size of a sector in the main part of

the memory, the buffer can store data that is intended for multiple sectors. Specifically the Yamagami reference states at column 21 line 54:

“The buffer area 142 whose capacity corresponds to a plurality of sectors can accept accesses for writing the data of a plurality of sectors:

Thus there two fundamental differences between what the applicant recites in claim 1 and what is shown in the Yamagami reference:

First: Yamagami shows in Figure 25 (which is the Figure referenced by the examiner) a buffer area that can be used to store data for more than one sector of the flash memory. This is directly contrary to what applicant teaches and claims.

Applicant's claim 1 recites:

“exclusively associating a bank of MRAM memory with a particular sector of said flash memory

Second: The entire thrust of applicant's invention involves taking advantage of the capabilities of two different types of memory to achieve a special result. The two types of memory and how they are used to achieve a novel result are recited in applicant's claims. Applicant's claim recited that the data is being transmitted from a host to a flash memory. The claims also recite that the data is temporarily stored in an MRAM buffer.

Both the buffer area and the main memory area in Figure 25 of Yamagami consist of flash memory. There is no teaching in Yamagami of the advantages achieved by combining a MRAM memory with a flash memory.

The Nickel reference does show MRAM. However, applicant's claims are not to an MRAM memory per se. Thus, the Nickel reference in no way satisfies the deficiencies in the Yamagami reference discussed above.

In the interest of completeness, it is noted the examiner referenced the embodiment in the Yamagami reference that is shown in Figure 25 of Yamagami. This is the

embodiment in the Yamagami reference that is discussed above. The Yamagami reference does have other embodiments that were not referenced by the examiner. These other embodiments involve the combination of a disk drive and a flash memory. However, as apparently recognized by the examiner, these other embodiments are even farther from the applicant's invention than the embodiment referenced by the examiner.

The above discussion relates specifically to applicant's claim 1; however, it applies equally to the other independent claims 8 and 15. Claims 2, 5-7, 9, 10, 12, 15, 16 and 19-20 are each directly or through another claim dependent upon one of the independent claims 1, 8 or 15. These dependent claims are patentable for the same reason as that explained above relative to their parent claim.

Therefore, applicant respectfully request re-consideration and allowance of claim 1-2, 5-10, 12, 14-16 and 19-20.

Claims 3-4, 11, 13, 17-18 were rejected under 35 USC 103(a) as being unpatentable over the combined teachings of Yamagami and Nickel, and in further view of U.S. Pat. No. 6,513,719 B1 to Imura ("Imura").

Claims 3-4, 11, 13, 17-18 are dependent claims that are dependent upon one of the independent claims 1, 8 and 11. The reasons that claims 1, 8 and 11 are not anticipated by Yamagami and Nickel is discussed above. The above discussion of Yamagami and Nickel is also applicable the rejection of dependent claims 3-4, 11, 13, 17-18 for the same reasons as it is applicable to the rejection of the parent claims.

The Imura reference shows the combination of a SIM card (that is used for authentication) to a "memory stick". The Imura reference has no teaching whatsoever concerning the use of an MRAM memory buffer for a flash memory as recited in applicants claims (the dependent claims or in their parent claims). Therefore the Imura reference in no way provides what is missing in the Yamagami or Nickel references.

Therefore withdrawal of the rejection of dependent claims 3-4, 11, 13, 17-18 is requested for the same reasons as explained above relative to the parent claims.

CONCLUSION

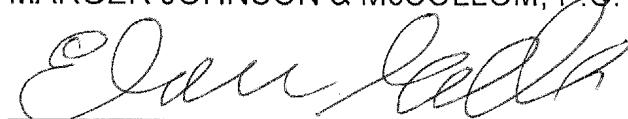
For the above described reasons, applicant respectfully requests reconsideration and allowance of claims 1-20, as amended for the reasons explained above.

The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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